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man and an analysis and an ana

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тте	600	Ar.g	ınr	ттр	GII	605		. not	, nys	, 11011	610				1	
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Compared to the control of the contr

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Lys	Leu	Pro	Glu	Asp	Gly	Lys	Asp	Asn	Asp	Asn	Phe	Arg	Ile	Lys		
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Arg Gly Lys Lys Thr Val Ala Gln Leu Met Glu Glu Cys Met His Phe

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Phe Gly Cys Asp Lys Asp Ile Glu Leu Asn Ala Gly Lys Glu Val Thr
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Ile Gly Ala Gly Gln Thr Arg Lys Val Gln Leu Ile Pro Leu Gly Gly
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Thr Ile Arg Glu Gly Met Gly Gln Ser Asn Ser Pro Asp Glu Asn Thr 50 55 60

Leu Asp Leu Val Ile Thr Asn Ala Met Ile Ile Asp Tyr Thr Gly Ile
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Tyr Lys Ala Asp Ile Gly Ile Lys Asn Gly Lys Ile His Gly Ile Gly 85 90 95

Lys Ala Gly Asn Lys Asp Met Gln Asp Gly Val Ser Pro His Met Val

Val Gly Val Gly Thr Glu Ala Leu Ala Gly Glu Gly Met Ile Ile Thr 115 120 125

Ala Gly Gly Ile Asp Ser His Thr His Phe Leu Ser Pro Gln Gln Phe 130 135 140

Pro Thr Ala Leu Ala Asn Gly Val Thr Thr Met Phe Gly Gly Gly Thr 145 150 155 160

Gly Pro Val Asp Gly Thr Asn Ala Thr Thr Ile Thr Pro Gly Lys Trp 165 170 175

Asn Leu His Arg Met Leu Arg Ala Ala Glu Glu Tyr Ser Met Asn Val

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Ile Lys Gly Gly Met Val Val Phe Ser Glu Met Gly Asp Ser Asn Ala 450 455 460

Ser Val Pro Thr Pro Gln Pro Val Tyr Tyr Arg Glu Met Phe Gly His 465 470 475 480

His Gly Lys Ala Lys Phe Asp Thr Ser Ile Thr Phe Val Ser Lys Val

Ala Tyr Glu Asn Gly Val Lys Glu Lys Leu Gly Leu Glu Arg Gln Val 500 505 510

Leu Pro Val Lys Asn Cys Arg Asn Ile Thr Lys Lys Asp Phe Lys Phe 515 520 525

Asn Asp Lys Thr Ala Lys Ile Thr Val Asp Pro Lys Thr Phe Glu Val 530 535 540

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Leu Gly Val Glu Ala Thr Phe Pro Asp Gly Thr Lys Leu Val Thr Val
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90

95

<del>+</del>	+~~	000	a <del>+ +</del>	~ a a	cct	cat	αaa	cac	+++	aaa	acc	aat	gaa	ata	aaa	336
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ASII	ттЬ	PLO		GIU	110	тор	014	105	2110	20		1	110		-	
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Phe	GLy		Asp	гуѕ	Asp	TTE		пеп	ASII	AIa	GTĀ	125	Olu	V 4 2	1110	
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Sold of the second seco

makening of the second of the

atc	act	ccg	ggc	aaa	tgg	aac	ttg	cac	cgc	atg	ttg	cgc	gca	gct	gaa	1249
Ile	Thr	Pro	Gly	Lys	Trp	Asn	Leu	His	Arg	Met	Leu	Arg	Ala	Ala	Glu	
		400					405					410				
aaa	tat	tct	atg	aat	ata	aac	ttt	tta	aac	aaa	ggc	aat	agc	tcc	agt	1297
			Met													
GLU	_	per	Mec	ASII	V U _	420	1110	200	0_1	1-	425					
	415					420					12.5					
								~	~~~	~~~	aaa	a++	aac	+++	222	1345
			ctc													1010
Lys	Lys	Gln	Leu	Val	Glu	Gln	Vai	GLU	Ala		Ата	TTe	GTĀ	·		
430					435					440					445	
ttg	cat	gaa	gac	tgg	ggc	aca	aca	cca	agt	gcg	atc	gat	cac	tgc	ttg	1393
Leu	His	Glu	Asp	Trp	Gly	Thr	Thr	Pro	Ser	Ala	Ile	Asp	His	Cys	Leu	
				450					455					460		
aσc	gta	qca	gat	gaa	tac	gat	gtg	caa	gtt	tgt	atc	cac	acc	gat	acg	1441
			Asp													
	·	1124	465	02.0	- 1 -			470		-			475			
			400													
	4				+ - +	at a	ast	asc	200	cta	aat	aca	ato	aac	ggg	1489
Va⊥	Asn			GTĀ	Tyr	vaı			1111	цеи	MS11	490		71517	Gly	
		480					485					490				
																1525
_	_														tca	1537
Arg	Ala	Ile	His	Ala	Tyr	His	Ile	Glu	Gly	Ala	. Gly	gly	Gly	His	Ser	
	495					500					505	j				
cct	gat	gtt	ato	acc	atg	gca	ggc	gag	ctc	aat	att	cta	. ccc	tac	tcc	1585
Pro	Asp	Val	Ile	Thr	Met	Ala	Gly	glu	. Leu	Asn	Ile	e Leu	Pro	Ser	Ser	
510					515	i				520	)				525	
acc	acc	ccc	. act	att	aac	: tat	acc	att	aat	acc	gtt	gca	gaa	cac	c tta	1633
															Leu	
T11T	TIIT	EΤĆ	, TIT			- Y -			535					540		
				530	,				,,,,	•						
													. ~~	. ~	t ast	1681
															g gat	1001
Asp	Met	Leu	ı Met	Thr	: Cys	His	His	: Leu	. Asp	) Lys	Arg	l TTE	e Arc	J GIL	ı Asp	

Collins of the second

The state of the s

545 550 555

ctc	cag	ttt	tcc	caa	agc	cgt	atc	cgc	ccc	ggc	tct	att	gcc	gct	gaa	1/29
Leu	Gln	Phe	Ser	Gln	Ser	Arg	Ile	Arg	Pro	Gly	Ser	Ile	Ala	Ala	Glu	
		560					565					570				
					,	-										
gat	gtg	ctc	cat	gat	att	ggc	gtg	atc	gcg	atg	aca	agc	tcg	gat	tcg	1777
			His													
_	575					580					585					
caa	gca	atg	ggg	cgc	gct	ggg	gaa	gtg	att	cct	aga	act	tgg	caa	act	1825
			Gly													
590			_		595					600					605	
qca	gac	aaq	aat	aaa	aaa	gaa	ttt	ggt	aag	ctt	cct	gaa	gat	ggt	gca	1873
			Asn													
	1	2		610	-				615					620		
σat	aat	σac	aac	ttc	cac	atc	aaa	cgc	tat	atc	tcc	aaa	tac	acc	att	1921
			Asn													
		1101	625		5		_	630	-				635			
aat	ccc	act	tta	acc	cat	ggc	gtg	agc	gag	tat	atc	ggc	tct	gtg	gaa	1969
															Glu	
		640				_	645					650				
gag	aac	aaq	atc	acc	σac	tta	ata	qtq	tgg	aat	cct	gct	ttc	ttt	ggt	2017
															Gly	
	655	-1-				660			-		665					
	000															
αta	aaa	acc	aaa	atc	ata	atc	aaa	aac	qqt	atg	gtg	gtg	ttc	tct	gaa	2065
															Glu	
670	-1-		-1-		675		-	_		680					685	
5,0					3.0											
at~	aac	ra+	+ < +	aac	מכת	tct	ata	ggg	aca	cct	caq	cca	gtt	tat	tac	2113
															Tyr	
115 C	оту	дар	OET	690	, 11 a	J C 1			695					700		
				030												

regularization and management and the second of the second

cgc	gaa	atg	ttt	ggg	cat	cac	ggc	aag	gcg	aaa	ttt	gac	acc	agc	atc	2161
Arg	Glu	Met	Phe	Gly	His	His	Gly	Lys	Ala	Lys	Phe	Asp	Thr	Ser	Ile	
			705					710					715			
act	+++	att	tcc	aaa	atc	acc	tat	gaa	aat	aac	ata	aaa	qaa	aaa	cta	2209
						*		Glu								
1117	rne		Ser	пуз	٧۵٢	2324	725	014		0-1		730		_		
		720					123					, 50				
								,			<b>1</b>			a <del>+</del> a	2.c+	2257
								gtg								4491
Gly	Leu	Glu	Arg	Lys	Val	Leu	Pro	Val	Lys	Asn		Arg	Asn	lle	Thr	
	735					740					745					
aag	aaa	gac	ttc	aaa	ttc	aac	aac	aag	acg	gcg	cat	atc	act	gtc	gat	2305
Lys	Lys	Asp	Phe	Lys	Phe	Asn	Asn	Lys	Thr	Ala	His	Ile	Thr	Val	Asp	
750					755					760					765	
cct	aaa	acc	ttc	gag	at.c	ttt	ata	gat	aac	aaa	ctc	tgc	acc	tct	aaa	2353
															Lys	
FIO	гуз	TIIT	rne	770	Val	1110	val	1100	775	-1-		- 1		780		
				770					,,,							
											<del>+</del>	++~	. ++~	+20	r	2398
								caa							)	2000
Pro	Ala	Ser			Pro	Leu	. Ala	Gln		Tyr	Thr	rne				
			785					790					795			
gca	caat															2405
<21	0> 5	ı														
<21	1> 2	26														
<21	2> F	RT														
		lelic	ohac	ter	feli	s										
\21			·obac		1011											
<10	0> 5															
			ሞኮ~	· Dro	. T.tre	ر ان	ı Glr	. Gl:	ı T.V.S	. Phe	. Lei	ı Le	ı Tvı	TV	r Ala	
		nen	. 1111			ا لت			. <u></u> 10				- 1 -	1!		
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						_	_		~ :	<i>~</i> '	. T	_ T -:	_ T	, 7·~-	o Clo	
Gly	Glu	ı Val			Lys	Arq	ј Гуз			ı G±Z	л тег	л г.Хг			n Gln	
			20	)				25	)				30	J		

Pro	Glu	Ala	Ile	Ala	Tyr	Ile	Ser	Ala	His	Ile	Met	Asp	Glu	Ala	Arg
		35					40					45			

- Arg Gly Lys Lys Thr Val Ala Glu Leu Met Glu Glu Cys Met His Phe 50 55 60
- Leu Lys Lys Asp Glu Val Met Pro Gly Val Gly Asn Met Val Pro Asp 65 70 75
- Leu Gly Val Glu Ala Thr Phe Pro Asp Gly Thr Lys Leu Val Thr Val 85 90 95
- Asn Trp Pro Ile Glu Pro Asp Glu His Phe Lys Ala Gly Glu Val Lys
  100 105 110
- Phe Gly Cys Asp Lys Asp Ile Glu Leu Asn Ala Gly Lys Glu Val Thr
  115 120 125
- Glu Leu Glu Val Thr Asn Glu Gly Pro Lys Ser Leu His Val Gly Ser 130 135 140
- Lys Ala Tyr Gly Lys Arg Leu Asp Ile Pro Ser Gly Asn Thr Leu Arg 165 170 175
- Ile Gly Ala Gly Gln Thr Arg Lys Val Gln Leu Ile Pro Leu Gly Gly
  180 185 190
- Ser Lys Lys Val Ile Gly Met Asn Gly Leu Val Asn Asn Ile Ala Asp 195 200 205
- Glu Arg His Lys His Lys Ala Leu Asp Lys Ala Lys Ser His Gly Phe 210 215 220

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Pro Thr Ala Leu Ala Asn Gly Val Thr Thr Met Phe Gly Gly Gly Thr

Gly	Pro	Val	Asp	Gly 165	Thr	Asn	Ala	Thr	Thr 170	Ile	Thr	Pro	Gly	Lys 175	Trp
Asn	Leu	His	Arg 180	Met	Leu	Arg	Ala	Ala 185	Glu	Glu	Tyr	Ser	Met 190	Asn	Val
Gly	Phe	Leu 195	Gly	Lys	Gly	Asn	Ser 200	Ser	Ser	Lys	Lys	Gln 205	Leu	Val	Glu
Gln	Val 210	Glu	Ala	Gly	Ala	Ile 215	Gly	Phe	Lys	Leu	His 220	Glu	Asp	Trp	Gly
Thr 225	Thr	Pro	Ser	Ala	Ile 230	Asp	His	Cys	Leu	Ser 235	Val	Ala	Asp	Glu	Tyr 240
Asp	Val	Gln	Val	Cys 245	Ile	His	Thr	Asp	Thr 250	Val	Asn	Glu	Ala	Gly 255	Tyr
Val	Asp	Asp	Thr 260		Asn	Ala	Met	Asn 265	Gly	Arg	Ala	Ile	His 270	Ala	Tyr
His	Ile	Glu 275	Gly	Ala	Gly	Gly	Gly 280		Ser	Pro	Asp	Val 285	Ile	Thr	Met
Ala	Gly 290		Leu	. Asn	Ile	Leu 295		Ser	Ser	Thr	Thr 300	Pro	Thr	Ile	Pro
Tyr 305		Ile	Asn	. Thr	Val		. Glu	His	Leu	Asp 315		Leu	Met	Thr	Cys 320
His	His	Leu	. Asp	) Lys 325		, Il∈	a Arg	, Glu	330		Gln	Phe	Ser	Gln 335	Ser
Arg	Ile	: Arg	Pro 340		Ser	: Ile	e Ala	Ala 345		. Asp	Val	Leu	His 350		Ile

Gly Val Ile Ala Met Thr Ser Ser Asp Ser Gln Ala Met Gly Arg Ala

355 360 365
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Gly	Glu	Val	Ile	Pro	Arg	Thr	Trp	Gln	Thr	Ala	Asp	Lys	Asn	Lys	Lys
	370					375					380				

- Glu Phe Gly Lys Leu Pro Glu Asp Gly Ala Asp Asn Asp Asn Phe Arg 385 390 395 400
- Ile Lys Arg Tyr Ile Ser Lys Tyr Thr Ile Asn Pro Ala Leu Thr His 405 410 415
- Gly Val Ser Glu Tyr Ile Gly Ser Val Glu Glu Gly Lys Ile Ala Asp 420 425 430
- Leu Val Val Trp Asn Pro Ala Phe Phe Gly Val Lys Pro Lys Ile Val 435 440 445
- Ile Lys Gly Gly Met Val Val Phe Ser Glu Met Gly Asp Ser Asn Ala 450 455 460
- Ser Val Pro Thr Pro Gln Pro Val Tyr Tyr Arg Glu Met Phe Gly His 465 470 475 480
- His Gly Lys Ala Lys Phe Asp Thr Ser Ile Thr Phe Val Ser Lys Val
- Ala Tyr Glu Asn Gly Val Lys Glu Lys Leu Gly Leu Glu Arg Lys Val 500 505 510
- Leu Pro Val Lys Asn Cys Arg Asn Ile Thr Lys Lys Asp Phe Lys Phe 515 520 525
- Asn Asn Lys Thr Ala His Ile Thr Val Asp Pro Lys Thr Phe Glu Val 530 535 540
- Phe Val Asp Gly Lys Leu Cys Thr Ser Lys Pro Ala Ser Glu Val Pro 545 550 555 555

Leu Ala Gln Arg Tyr Thr Phe Phe 565

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75

ttt ttg aaa aaa gat gag gtg atg ccc ggt gtg ggg aat atg gtc cct Phe Leu Lys Lys Asp Glu Val Met Pro Gly Val Gly Asn Met Val Pro

70

65

gat	ttg	ggc	gta	gaa	gcc	act	ttc	ccc	gat	ggc	acc	aaa	ctc	gta	acc	287
Asp	Leu	Gly	Val	Glu	Ala	Thr	Phe	Pro	Asp	Gly	Thr	Lys	Leu	Val	Thr	
80					85					90					95	
gtg	aat	tgg	ccc	att	gaa	cct	gat	gaa	cac	ttt	aaa	gcc	ggt	gaa	gtg	335
Val	Asn	Trp	Pro	Ile	Glu	Pro	Asp	Glu	His	Phe	Lys	Ala	Gly	Glu	Val	
				100					105					110		
aaa	ttt	ggc	tgt	gat	aaa	gac	att	gag	ctc	aac	gtg	ggt	aag	gaa	gtt	383
Lys	Phe	Gly	Cys	Asp	Lys	Asp	Ile	Glu	Leu	Asn	Val	Gly	Lys	Glu	Val	
			115					120					125			
acc	gag	ctt	gaa	gtt	acc	aac	gaa	gga	cct	aaa	tcc	ttg	cat	gtg	ggt	431
Thr	Glu	Leu	Glu	Val	Thr	Asn	Glu	Gly	Pro	Lys	Ser	Leu	His	Val	Gly	
		130					135					140				
agc	cat	ttc	cac	ttc	ttt	gaa	acc	aac	aag	gca	ttg	aaa	ttc	gat	cgg	479
Ser	His	Phe	His	Phe	Phe	Glu	Thr	Asn	Lys	Ala	Leu	Lys	Phe	Asp	Arg	
	145					150					155					
_						cgc										527
Glu	Lys	Ala	Tyr	Gly	Lys	Arg	Leu	Asp	Ile	Pro	Ser	Gly	Asn	Thr		
160					165					170					175	
_															ggc	575
Arg	Ile	Gly	Ala	Gly	Gln	Thr	Arg	Lys			Leu	Ile	Pro			
				180					185					190		
											,				~~~	622
	_														gcg	623
Gly	Ser	Lys			Ile	e Gly	Met			Leu	ı val	. Asn			ALA	
			195	•				200					205	,		
							~~~	a+ 5	~		, ,,,,,	222	<b>t</b> ct	· cac	r aaa	671
															gga Gly	• • •
ASP	GTU	_		, пуз	птр	, mys	215		. 140 P	ەلات .	, 11±0	220			- <b>-</b> 1	
		210					د لما ب	•				220				
++~	ato	י אאת	taa	, aaa	gact	ccc	atσ	aaa	atσ	aaa	aaa	caa	gaq	tat	gta	720
	ull	uay	caa	. 990	9400		5						, ,		-	

announcement of the control of the c

20 cm warmen

Phe	Ile	Lys				M	et I	ys M	et L	ys L	ys G	ln G	lu T	yr V	al	
	225							2	30				2	35		
aac	acc	tac	gga	ccc	acc	aca	ggc	gat	aaa	gtg	cgc	tta	gga	gat	acc	768
Asn	Thr	Tyr	Gly	Pro	Thr	Thr	Gly	Asp	Lys	Val	Arg	Leu	Gly	Asp	Thr	
			240		7	•		245					250			
gat	ctt	tgg	gca	gaa	gta	gaa	cat	gac	tat	acc	act	tat	ggc	gaa	gag	816
Asp	Leu	Trp	Ala	Glu	Val	Glu	His	Asp	Tyr	Thr	Thr	Tyr	Gly	Glu	Glu	
		255					260					265				
ctc	aaa	ttt	ggc	gcg	ggt	aaa	act	atc	cgt	gag	ggt	atg	ggt	cag	agc	864
Leu	Lys	Phe	Gly	Ala	Gly	Lys	Thr	Ile	Arg	Glu	Gly	Met	Gly	Gln	Ser	
	270					275					280					
aat	agc	cca	gat	gaa	aac	acc	tta	gat	tta	gtg	atc	acc	aac	gcg	atg	912
Asn	Ser	Pro	Asp	Glu	Asn	Thr	Leu	Asp	Leu	Val	Ile	Thr	Asn	Ala	Met	
285					290					295					300	
att	atc	gac	tac	acc	ggg	att	tat	aaa	gcc	gac	att	ggt	att	aaa	aat	960
Ile	Ile	Asp	Tyr	Thr	Gly	Ile	Tyr	Lys	Ala	Asp	Ile	Gly	Ile	Lys	Asn	
				305					310					315		
ggc	aaa	atc	cat	ggt	att	ggc	aag	gcg	ggg	aac	aaa	gac	atg	caa	gat	1008
Gly	Lys	Ile	His	Gly	Ile	Gly	Lys	Ala	Gly	Asn	Lys	Asp	Met	Gln	Asp	
			320					325					330			
ggc	gta	agc	cct	cat	atg	gtc	gtg	ggt	gtg	ggc	aca	gaa	gca	cta	gca	1056
Gly	Val	Ser	Pro	His	Met	Val	Val	Gly	Val	Gly	Thr	Glu	Ala	Leu	Ala	
		335					340					345				
ggg	gaa	ggt	atg	att	att	acc	gct	ggg	ggg	atc	gat	tcg	cac	acc	cac	1104
Gly	Glu	Gly	Met	Ile	Ile	Thr	Ala	Gly	Gly	Ile	Asp	Ser	His	Thr	His	
	350					355					360					
ttc	ctc	tct	ccc	caa	caa	ttc	cct	acc	gct	cta	gcc	aat	ggt	gtt	aca	1152
Phe	Leu	Ser	Pro	Gln	Gln	Phe	Pro	Thr	Ala	Leu	Ala	Asn	Gly	val	Thr	
365					370					375					380	

																1200
											ggc					1200
Thr	Met	Phe	Gly	Gly	Gly	Thr	Gly	Pro	Val	Asp	Gly	Thr	Asn		Thr	
				385					390					395		
						æ										
acc	atc	act	ccg	ggc	aaa	tgg	aac	ttg	cac	cgc	atg	ttg	cgc	gca	gct	1248
Thr	Ile	Thr	Pro	Gly	Lys	Trp	Asn	Leu	His	Arg	Met	Leu	Arg	Ala	Ala	
			400					405					410			
gaa	gag	tat	tct	atg	aat	gta	ggc	ttt	ttg	ggc	aaa	ggc	aat	agt	tct	1296
											Lys					
		415					420					425				
agc	aaa	aaa	caa	ctt	gta	gaa	caa	gta	gaa	gcg	ggc	gcg	att	ggc	ttt	1344
											Gly					
001	430	1-				435					440					
	200															
222	tta	cat	gaa	gac	t.aa	aac	aca	aca	cca	agt	gcg	atc	gat	cac	tgc	1392
											Ala					
445	шса	1110	014	1101	450	1				455			_		460	
110																
++~	200	ata	aaa	ant.	maa	tac	cat	ata	саа	at.t.	tgt	atc	cac	acc	gat	1440
											Cys					
пеп	ser	val	ATG	465	OLU	- Y -	1100	, 42	470		• <u>1</u> –			475	-	
				400					110							
		4			~~+	+-+	~+ ~	· ant	a a a	200	cta	aat	aca	ato	aac	1488
Thr	vaı	Asn			СТУ	TĂŢ	Val			1111	Leu	non	490		11011	
			480					485					400			
						t			~	. ~~~	~~~		. ~~	aas	CaC	1536
															cac	1330
Gly	Arg			His	Ala	туг			GIU	. СТУ	Ala			, стх	UIS	
		495					500					505				
													•			1 = 0 4
															tcc	1584
Ser	Pro	Asp	Val	Ile	Thr			Gly	Glu	Leu			Leu	ı Pro	Ser	
	510					515					520					
																1.000
tcc	acc	acc	ccc	: act	att	: ccc	: tat	acc	att	aat	acg	gtt	. gca	ı gaa	cac	1632

Ser 525	Thr	Thr	Pro	Thr	Ile 530	Pro	Tyr	Thr	Ile	Asn 535	Thr	Val	Ala	Glu	His 540	
				atg Met 545												1680
				tct Ser												1728
				cat His												1776
				ggg Gly												1824
				aat Asn												1872
				aac Asn 625											Thr	1920
				ttg Leu					Ser					Ser	gtg Val	1968
				atc Ile				Val					Ala		ttt Phe	2016
							Ile					Val			tct Ser	2064

gaa	atg	ggc	gat	tct	aac	gcg	tcc	gtg	ccc	acg	cct	cag	ccg	gtt	tat	2112
Glu	Met	Gly	Asp	Ser	Asn	Ala	Ser	Val	Pro	Thr	Pro	Gln	Pro	Val	Tyr	
685					690					695					700	
tac	cgc	gaa	atq	ttt	ggg .	cac	cac	ggc	aag	gcg	aaa	ttt	gac	acc	agc	2160
		Glu														
-	-			705	_				710					715		
atc	act	ttt	cgt	gtc	tca	agc	gg									2183
		Phe														
			720													
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Val	Lys	Leu	Thr	Pro	Lys	Glu	Gln	Glu	Lys	Phe	Leu	Leu	Tyr	Tyr	Ala	
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Gly	Glu	Val	Ala	Arg	Lys	Arg	Lys	Ala	Glu	Gly	Leu	Lys	Leu	Asn	Gln	
			20					25					30			
Pro	Glu	Ala	Ile	Ala	Tyr	Ile	Ser	Ala	His	Ile	Met	Asp	Glu	Ala	Arg	
		35					40					45				
Arq	Gly	Lys	Lys	Thr	Val	Ala	Glu	Leu	Met	Glu	Glu	. Cys	Met	His	Phe	
_	50		-			55					60					
Leu	Lvs	Lys	Asp	Glu	Val	Met	Pro	Gly	Val	Gly	Asn	Met	Val	Pro	Asp	
65	4	2	-		70					75					80	
Leu	Glν	· Val	Glu	Ala	Thr	Phe	Pro	Asp	Gly	Thr	Lys	: Leu	Val	. Thr	Val	
Leu	Gly	·Val	Glu	Ala 85		Phe	Pro	Asp	Gly 90		· Lys	: Leu	Val	. Thr 95	Val	

Asn Trp Pro Ile Glu Pro Asp Glu His Phe Lys Ala Gly Glu Val Lys Phe Gly Cys Asp Lys Asp Ile Glu Leu Asn Val Gly Lys Glu Val Thr Glu Leu Glu Val Thr Asn Glu Gly Pro Lys Ser Leu His Val Gly Ser His Phe His Phe Phe Glu Thr Asn Lys Ala Leu Lys Phe Asp Arg Glu Lys Ala Tyr Gly Lys Arg Leu Asp Ile Pro Ser Gly Asn Thr Leu Arg Ile Gly Ala Gly Gln Thr Arg Lys Val Gln Leu Ile Pro Leu Gly Gly Ser Lys Lys Val Ile Gly Met Asn Gly Leu Val Asn Asn Ile Ala Asp Glu Arg His Lys His Lys Ala Leu Asp Lys Ala Lys Ser His Gly Phe Ile Lys <210> 9 <211> 496 <212> PRT <213> Helicobacter felis <400> 9

Gly Asp Lys Val Arg Leu Gly Asp Thr Asp Leu Trp Ala Glu Val Glu

Met Lys Met Lys Lys Gln Glu Tyr Val Asn Thr Tyr Gly Pro Thr Thr

His Asp Tyr Thr Thr Tyr Gly Glu Glu Leu Lys Phe Gly Ala Gly Lys 35 40 45

Thr Ile Arg Glu Gly Met Gly Gln Ser Asn Ser Pro Asp Glu Asn Thr 50 55 60

Leu Asp Leu Val Ile Thr Asn Ala Met Ile Ile Asp Tyr Thr Gly Ile 65 70 75 80

Tyr Lys Ala Asp Ile Gly Ile Lys Asn Gly Lys Ile His Gly Ile Gly 85 90 95

Lys Ala Gly Asn Lys Asp Met Gln Asp Gly Val Ser Pro His Met Val 100 105 110

Val Gly Val Gly Thr Glu Ala Leu Ala Gly Glu Gly Met IIe Ile Thr 115 120 125

Ala Gly Gly Ile Asp Ser His Thr His Phe Leu Ser Pro Gln Gln Phe 130 135 140

Pro Thr Ala Leu Ala Asn Gly Val Thr Thr Met Phe Gly Gly Gly Thr 145 150 155 160

Gly Pro Val Asp Gly Thr Asn Ala Thr Thr Ile Thr Pro Gly Lys Trp 165 170 175

Asn Leu His Arg Met Leu Arg Ala Ala Glu Glu Tyr Ser Met Asn Val 180 185 190

Gly Phe Leu Gly Lys Gly Asn Ser Ser Ser Lys Lys Gln Leu Val Glu
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Gln Val Glu Ala Gly Ala Ile Gly Phe Lys Leu His Glu Asp Trp Gly 210 215 220

Thr 225	Thr	Pro	Ser	Ala	Ile 230	Asp	His	Cys	Leu	Ser 235	Val	Ala	Asp		Tyr 240
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His	Ile	Glu 275	Gly	Ala	Gly	Gly	Gly 280	His	Ser	Pro	Asp	Val 285	Ile	Thr	Met
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Tyr 305	Thr	Ile	Asn	Thr	Val 310	Ala	Glu	His	Leu	Asp 315		Leu	Met	Thr	Cys 320
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Arg	Ile	Arg	Pro 340		Ser	Ile	Ala	Ala 345		Asp	· Val	Leu	His 350		Ile
Gly	Val	Ile 355		. Met	Thr	Ser	Ser 360		Ser	Gln	Ala	. Met 365		Arg	Ala
Gly	Glu 370		. Ile	e Pro	Arg	Thr 375		Glr	n Thr	Ala	Asp 380		Asn	. Lys	Lys
Glu 385		e Gly	/ Lys	. Leu	390		ı Asp	Gl <sub>S</sub>	y Ala	395		n Asp	Asn	Phe	Arg 400
Ile	. Lys	arç	ј Туг	11e		Lys	з Туг	Thi	11e		n Pro	Ala	. Leu	Thr 415	His
Gly	v Val	. Ser	c Glu	і Туг	: Ile	e Gly	/ Sei	r Val	L Glu	ı Glu	ı Gly	, Lys	: Ile	e Ala	Asp

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25

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Gly Glu Val Ala Arg Lys Arg Lys Ala Glu Gly Leu Lys Leu Asn Gln

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		aaa Lys			Val											193
		aaa Lys														241
		gtg Val	-	_												289
		ccc Pro		gaa					ttc					Val		337
		tgt Cys	gat		_			ctc Leu					gaa	gtt		385
	Leu	115 gaa Glu				Glu	gga Gly	cct			Leu	cat His				433
		cac His			Glu	Ala	aac			Leu	Lys	ttc			Glu	481
	gcc	: tat				cta					ggc				160 cgc	529
	_	_		Gln	acc				Gln	tta				ı Gly	ggc Gly	577

agt	aaa	aaa	gtg	att	ggc	atg	aac	ggg	ctt	gtg	aat	aat	att	gca	gat	625
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-					aaa.											673
Glu	Arg	His	Lys	His	Lys	Ala	Leu	Glu	Lys	Ala	Lys	Ser	His	Gly	Phe	
	210					215					220					
															,	700
		taa	ggag	gacto	ccc a											722
Ile	Lys				ľ	1et I			Lys I	lys (	∃ln (			/al /	Asn	
225								230				2	235			
									~+~	~~~	++-	~~~	ant	3.00	ast.	770
					aca											770
Thr	Tyr		Pro	Tnr	Thr	СТХ	245	ьуѕ	Val	Arg	пеа	250	лэр	1111	пор	
		240					247					250				
c++	taa	ac a	maa	at a	gaa	cat	gac	tat	acc	act	tat	aac	gaa	qaq	ctc	818
					Glu											
ncu	255	7114	OLG			260					265	-				
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Lys	Phe	Gly	Ala	Gly	Lys	Thr	Ile	Arg	Glu	Gly	Met	Gly	Gln	Ser	Asn	
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					ggc											1010
Lys	Ile			Ile	Gly	Lys			Asn	Ьys	Asp		GIN	Asp	GTÀ	
		320					325					330				
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gta	agc	cct	cat	atg	gtc	gtg	ggt	gtg	ggc	aca	yaa	yca	ıld	gua	999	1000

Val	Ser 335	Pro	His	Met	Val	Val 340	Gly	Val	Gly	Thr	Glu 345	Ala	Leu	Ala	Gly	
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Glu	Gly	Met	Ile	Ile	Thr	Ala	Gly	Gly	Ile	Asp	Ser	His	Thr	His	Phe	
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Leu	Ser	Pro	Gln	Gln	Phe	Pro	Thr	Ala	Leu	Ala	Asn	Gly	Val	Thr	Thr	
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Met	Phe	Gly	Gly	Gly	Thr	Gly	Pro	Val	Asp	Gly	Thr	Asn	Ala	Thr	Thr	
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Glu	Tyr	Ser	Met	Asn	Val	Gly	7 Phe	Leu	Gly	Lys	: Gly	Asr.	Ser	Ser	Ser	
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Lys	Lys	Gln	Leu	. Val	. Glu	Glr	ı Ile	e Glu	Ala	Gl	/ Ala	a Ile	e Gly	/ Phe	e Lys	
430	1				435	5				440	)				445	
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Let	ı His	Glu	Asp	Trp	Gl3	/ Thi	r Thi	r Pro	Sei	Ala	a Ile	e Asp	) His		s Leu	
				45(	)				455	5				460	)	
ago	gta	a gca	ı gat	gaa	a tao	c gai	t gto	g caa	a gtt	t tgi	t at	c ca	c acc	c gat	acg	1442
Sei	. Val	Ala	a Asr	Glı	ı Tyı	r Ası	o Va	l Glr	ı Vai	l Cya	s Il	e Hi:	s Thi	r Ası	o Thr	
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gto	c aat	gaç	g gca	a ggt	t tat	t gt:	a ga	t gad	c ac	c ct	g aa	t gc	g at	g aa	c ggg	1490
Va.	l Asr	n Glu	ı Ala	a Gl	у Туз	r Va	l Ası	e As	Th:	r Le	u As	n Al	a Me	t Ası	n Gly	
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Pro	Asp	Val	Ile	Thr	Met	Ala	Gly	Glu	Leu	Asn	Ile	Leu	Pro	Ser	Ser	
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						tcc Ser					_	_	-			2114
						cac His						_		-		2162
						gcc Ala										2210
						cta Leu 740					_	-				2258
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Arg Gly Lys Lys Thr Val Ala Glu Leu Met Glu Glu Cys Met His Phe 50 55 60

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Leu Gly Val Glu Ala Thr Phe Pro Asp Gly Thr Lys Leu Val Thr Val
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Asn Trp Pro Ile Glu Pro Asp Glu His Phe Lys Ala Gly Glu Val Lys
100 105 110

Phe Gly Cys Asp Lys Asp Ile Glu Leu Asn Ala Gly Lys Glu Val Thr
115 120 125

Glu Leu Glu Val Thr Asn Glu Gly Pro Lys Ser Leu His Val Gly Ser 130 135 140

His Phe His Phe Phe Glu Ala Asn Lys Ala Leu Lys Phe Asp Arg Glu

Ile

Lys Ala Tyr Gly Lys Arg Leu Asp Ile Pro Ser Gly Asn Thr Leu Arg 165 170 175

Ile Gly Ala Gly Gln Thr Arg Lys Val Gln Leu Ile Pro Leu Gly Gly
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35 40 45

Thr Ile Arg Glu Gly Met Gly Gln Ser Asn Ser Pro Asp Glu Asn Thr 50 55 60

Leu Asp Leu Val Ile Thr Asn Ala Met Ile Ile Asp Tyr Thr Gly Ile 65 70 75 80

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Ala	Gly 130	Gly	Ile	Asp	Ser	His 135	Thr	His	Phe	Leu	Ser 140	Pro	Gln	Gln	Phe
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Gly	Pro	Val	Asp	Gly 165	Thr	Asn	Ala	Thr	Thr 170	Ile	Thr	Pro	Gly	Lys 175	Trp
Asn	Leu	His	Arg 180	Met	Leu	Arg	Ala	Ala 185	Glu	Glu	Tyr	Ser	Met 190	Asn	Val
Gly	Phe	Leu 195	Gly	Lys	Gly	Asn	Ser 200	Ser	Ser	Lys	Lys	Gln 205	Leu	Val	Glu
Gln	Ile 210	Glu	Ala	Gly	Ala	Ile 215	Gly	Phe	Lys	Leu	His 220	Glu	Asp	Trp	Gly
Thr 225	Thr	Pro	Ser	Ala	Ile 230	Asp	His	Cys	Leu	Ser 235	Val	Ala	Asp	Glu	Tyr 240
Asp	Val	Gln	Val	Cys 245	Ile	His	Thr	Asp	Thr 250	Val	Asn	Glu	Ala	Gly 255	Tyr
Val	Asn	Asn	Thr	T.e.11	Aen	Ala	Met	Asn	Glv	Ara	Δla	TIA	His	Δla	ጥላፖ

His Ile Glu Gly Ala Gly Gly His Ser Pro Asp Val Ile Thr Met

- Ala Gly Glu Leu Asn Ile Leu Pro Ser Ser Thr Thr Pro Thr Ile Pro 290 295 300
- Tyr Thr Ile Asn Thr Val Ala Glu His Leu Asp Met Leu Met Thr Cys 305 310 315 320
- His His Leu Asp Lys Arg Ile Arg Glu Asp Leu Gln Phe Ser Gln Ser 325 330 335
- Arg Ile Arg Pro Gly Ser Ile Ala Ala Glu Asp Val Leu His Asp Ile 340 345 350
- Gly Val Ile Ala Met Thr Ser Ser Asp Ser Gln Ala Met Gly Arg Ala 355 360 365
- Gly Glu Val Ile Pro Arg Thr Trp Gln Thr Ala Asp Lys Asn Lys Lys 370 375 380
- Glu Phe Gly Lys Leu Pro Glu Asp Ser Ala Asp Asn Asp Asn Phe Arg 385 390 395 400
- Ile Lys Arg Tyr Ile Ser Lys Tyr Thr Ile Asn Pro Ala Leu Thr His 405 410 415
- Gly Val Ser Glu Tyr Ile Gly Ser Val Glu Glu Gly Lys Ile Ala Asp 420 425 430
- Leu Val Val Trp Asn Pro Ala Phe Phe Gly Val Lys Pro Lys Ile Val
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- Ser Val Pro Thr Pro Gln Pro Val Tyr Tyr Arg Glu Met Phe Gly His 465

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485 490 495
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Ala Tyr Glu Asn Gly Val Lys Glu Lys Leu Gly Leu Glu Arg Lys Val 500 505 510

Leu Pro Val Lys Asn Cys Arg Asn Ile Thr Lys Lys Asp Phe Lys Phe 515 520 525

Asn Asn Lys Thr Ala His Ile Thr Val Asp Pro Lys Thr Phe Glu Val 530 535 540

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Val Lys Leu

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Thr	Pro	Lys	Glu	Gln	Glu	Lys	Phe	Leu	Leu	Tyr	Tyr	Ala	Gly	Glu	Val	
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Ile	Ala	Tyr	Ile	Ser	Ala	His	Ile	Met	Asp	Glu	Ala	Arg	Arg	Gly	Lys	
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aaa	acc	gtt	gcg	gaa	ctt	atg	gaa	gag	tgt	atg	cac	ttt	ttg	aaa	aaa	248
Lys	Thr	Val	Ala	Glu	Leu	Met	Glu	Glu	Cys	Met	His	Phe	Leu	Lys	Lys	
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gac	gag	gtg	atg	CCC	ggg	gtg	ggg	aat	atg	gtc	cct	gat	ttg	ggc	gtg	296
Asp	Glu	Val	Met	Pro	Gly	Val	Gly	Asn	Met	Val	Pro	Asp	Leu	Gly	Val	
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Glu		Thr	Phe	Pro	Asp	Gly	Thr	Lys	Leu	Val	Thr	Val	Asn	Trp	Pro	
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	_		_	_		ttt			- "	_					_	392
	Glu	Pro	Asp	Glu		Phe	Lys	Ala	Gly			Lys	Phe	Gly		
100					105					110					115	
														-4		4.40
_		-		-		aac				_	-		_		-	440
Asp	цуs	Asp	TTE		Leu	Asn	Ald	сту	-	GIU	vaı	Thr	GIU		GLU	
				120					125					130		
~++	a <b>~</b> +	220	~~-	~~~	aa+	227	+~~	++~	co+	~+ ~	~~+	200	ca+	++~	626	488
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val	T11T.	W2II	135	ату	ETO	пÃр	net	140	1172	val	атА	26T	145	FIIG	HIS	
			100					±40					777			
ttc	<b>t++</b>	gaa	מככ	aac	aaa	gca	tta	aaa	ttc	gat	Gaa	gaa	222	מככ	tat	536
		-	-			Ala	-			-		-		-		200

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Val	Ile	Gly	Met	Asn	Gly	Leu	Val	Asn	Asn	Ile	Ala	Asp	Glu	Arg	His	
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Lys	His	Lys	Ala	Leu	Asp	Lys	Ala	Lys	Ser	His	Gly	Phe	Ile	Lys		
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Pro	Thr	Thr	Gly	Asp	Lys	Val	Arg	Leu	Gly	Asp	Thr	Asp	Leu	Trp	Ala	
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Glu	Asn	Thr	Leu	Asp	Leu	Val	Ile	Thr	Asn	Ala	Met	Ile	Ile	Asp	Tyr	
	290					295					300					

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Thr	Gly	Ile	Tyr	Lys	Ala	Asp	Ile	Gly	Ile	Lys	Asn	Gly	Lys	Ile	His	
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-			_	_		*Asn										
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cat	ato	ata	ata	aat	ata	ggc	aca	raa	aca	cta	aca	aaa	gaa	aat	atα	1113
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птэ	Met	val		сту	val	сту	TIIL		мта	пеп	нта	GTA		СТУ	Mec	
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																1161
			_			atc										1161
Ile	Ile		Ala	Gly	Gly	Ile	_	Ser	His	Thr	His		Leu	Ser	Pro	
		355					360					365				
caa	caa	ttc	cct	acc	gct	cta	gcc	aat	ggc	gtt	aca	aca	atg	ttt	ggc	1209
Gln	Gln	Phe	Pro	Thr	Ala	Leu	Ala	Asn	Gly	Val	Thr	Thr	Met	Phe	Gly	
	370					375					380					
ggt	ggc	aca	ggc	ccc	gta	gat	ggc	acg	aat	gcg	act	acc	atc	act	ccg	1257
Gly	Gly	Thr	Gly	Pro	Val	Asp	Gly	Thr	Asn	Ala	Thr	Thr	Ile	Thr	Pro	
385					390					395					400	
ggc	aaa	tgg	aac	ttg	cac	cgc	atg	ttg	cgc	gca	gca	gaa	gag	tat	tct	1305
Gly	Lys	Trp	Asn	Leu	His	Arg	Met	Leu	Arg	Ala	Ala	Glu	Glu	Tyr	Ser	
				405					410					415		
atg	aat	ata	ggc	ttt	ttg	ggc	aaa	ggc	aat	aqc	tct	agt	aaa	aaa	caa	1353
		_													Gln	
			420			2	-	425					430	_		
ctt	ata	паа	caa	ata	паа	aca	aac	aca	att	aat	+++	aaa	tta	cat	gaa	1401
		_		_											Glu	1401
⊂u	A CT T	435	0.111	v a.T.	ب يد ب	11±0	440	111C	143	Ory	1116	445	ьcu	1173	Q_LU	
		400					330					147				
	+- ^-					a ~-t-	~~~	<b></b>	~~+	<b>a</b>		<b>4</b> 4		- سليم	~~~	1 4 4 0
											-	_			gca	1449
Asp	rrp	GTA	Thr	Thr	Pro	ser	АТа	тте	Asp	HlS	Cys	Leu	ser	vai	Ala	

465

gat gaa tac gat gtg caa gtt tgt ata cac acc gat acg gtc aat gag
Asp Glu Tyr Asp Val Gln Val Cys Ile His Thr Asp Thr Val Asn Glu

460

480

475

455

470

gca ggt tat gta gat gac acc cta aat gca atg aac ggg cgc gcc atc 1549
Ala Gly Tyr Val Asp Asp Thr Leu Asn Ala Met Asn Gly Arg Ala Ile
485 490 495

cat gcc tac cac att gag gga gcg ggt gga gga cac tca cct gat gtt 1593 His Ala Tyr His Ile Glu Gly Ala Gly Gly Gly His Ser Pro Asp Val 500 505 510

atc acc atg gca ggc gaa gtg aat att cta ccc tcc tcc aca acc cct 1641

Ile Thr Met Ala Gly Glu Val Asn Ile Leu Pro Ser Ser Thr Thr Pro
515 520 525

act atc ccc tat acc att aat acg gtt gca gaa cac tta gac atg ctt 1689
Thr Ile Pro Tyr Thr Ile Asn Thr Val Ala Glu His Leu Asp Met Leu
530 535 540

atg acc tgc cac cac cta gat aaa cgc atc cgc gag gat ctc caa ttt 1737 Met Thr Cys His His Leu Asp Lys Arg Ile Arg Glu Asp Leu Gln Phe 545 550 555 560

tct caa agc cgt atc cgc ccc ggc tct atc gcc gct gaa gat gtg ctc 1785 Ser Gln Ser Arg Ile Arg Pro Gly Ser Ile Ala Ala Glu Asp Val Leu 565 570 575

cat gat atc ggt gtg atc gcg atg aca agt tcc gat tcg caa gca atg 1833
His Asp Ile Gly Val Ile Ala Met Thr Ser Ser Asp Ser Gln Ala Met
580 585 590

ggg cgc gct ggg gaa gtg att cct aga act tgg caa act gca gac aag 1881 Gly Arg Ala Gly Glu Val Ile Pro Arg Thr Trp Gln Thr Ala Asp Lys 595 600 605

1-3838888 - 152 Sept. Se

			gaa		-				_	_		_	-		_	1929
Asn	Lys 610	Lys	Glu	Phe	СТĀ	Lys 615	Leu	Pro	Glu	Asp	Gly 620	Ala	Asp	Asn	Asp	
aac	ttc	cgc	atc	aaa	cgc	tat	atc	tcc	aaa	tac	acc	att	aat	ccc	gct	1977
Asn	Phe	Arg	Ile	Lys	Arg	Tyr	Ile	Ser	Lys	Tyr	Thr	Ile	Asn	Pro	Ala	
625					630					635					640	
ttg	acc	cat	ggc	gtg	agc	gag	tat	atc	ggc	tct	gtg	gaa	gag	ggc	aag	2025
Leu	Thr	His	Gly	Val	Ser	Glu	Tyr	Ile	Gly	Ser	Val	Glu	Glu	Gly	Lys	
				645					650					655		
atc	gcc	gac	ttg	gtg	gtg	tgg	aat	cct	gcc	ttt	ttt	ggc	gta	aaa	ccc	2073
Ile	Ala	Asp	Leu	Val	Val	Trp	Asn	Pro	Ala	Phe	Phe	Gly	Val	Lys	Pro	
			660					665					670			
aaa	atc	gtg	atc	aaa	ggc	ggt	atg	gtg	gtg	ttc	tct	gaa	atg	ggc	gat	2121
Lys	Ile	Val	Ile	Lys	Gly	Gly	Met	Val	Val	Phe	Ser	Glu	Met	Gly	Asp	
		675					680					685				
tct	aat	gcg	tct	gtg	ccc	act	cct	cag	ccg	gtt	tat	tac	cgc	gaa	atg	2169
Ser	Asn	Ala	Ser	Val	Pro	Thr	Pro	Gln	Pro	Val	Tyr	Tyr	Arg	Glu	Met	
	690					695					700					
ttt	ggg	cat	cac	ggc	aag	gcg	aaa	ttt	gac	acc	agc	atc	act	ttt	gtt	2217
Phe	Gly	His	His	Gly	Lys	Ala	Lys	Phe	Asp	Thr	Ser	Ile	Thr	Phe	Val	
705					710					715					720	
tcc	aaa	gtc	gcc	tat	gaa	aat	ggt	gtg	aaa	gaa	aaa	cta	ggt	tta	gag	2265
Ser	Lys	Val	Ala	Tyr	Glu	Asn	Gly	Val	Lys	Glu	Lys	Leu	Gly	Leu	Glu	
				725					730					735		
cgc	aag	gtg	ctc	ccc	gtg	aaa	aac	tgc	cgt	aac	atc	acc	aag	aag	gac	2313
Arg	Lys	Val	Leu	Pro	Val	Lys	Asn	Cys	Arg	Asn	Ile	Thr	Lys	Lys	Asp	
			740					745					750			
ttc	aag	ttc	aac	gac	aaa	act	gca	aaa	atc	acc	gtc	gat	ccg	aaa	acc	2361
Phe	Lys	Phe	Asn	Asp	Lys	Thr	Ala	Lys	Ile	Thr	Val	Asp	Pro	Lys	Thr	

755 760 765

ttc gag gtc ttt gta gat ggc aaa ctc tgc acc tct aaa ccc acc tct 2409 Phe Glu Val Phe Val Asp Gly Lys Leu Cys Thr Ser Lys Pro Thr Ser

780

770 775

gaa gtg cct cta gcc caa cgc tac act ttc ttc tag gcataat 2452
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Arg Gly Lys Lys Thr Val Ala Glu Leu Met Glu Glu Cys Met His Phe 50 55 60

Leu Lys Lys Asp Glu Val Met Pro Gly Val Gly Asn Met Val Pro Asp 65 70 75 80

Leu Gly Val Glu Ala Thr Phe Pro Asp Gly Thr Lys Leu Val Thr Val
85 90 95

Asn Trp Pro Ile Glu Pro Asp Glu His Phe Lys Ala Gly Glu Val Lys
100 105 110

Phe Gly Cys Asp Lys Asp Ile Glu Leu Asn Ala Gly Lys Glu Val Thr 115 120 125 Glu Leu Glu Val Thr Asn Glu Gly Pro Lys Ser Leu His Val Gly Ser 130 His Phe His Phe Glu Ala Asn Lys Ala Leu Lys Phe Asp Arg Glu 145 150 155 160 Lys Ala Tyr Gly Lys Arg Leu Asp Ile Pro Ser Gly Asn Thr Leu Arg 170 165 175 Ile Gly Ala Gly Gln Thr Arg Lys Val Gln Leu Ile Pro Leu Gly Gly 180 185 190 Ser Lys Lys Val Ile Gly Met Asn Gly Leu Val Asn Asn Ile Ala Asp 195 200 205 Glu Arg His Lys His Lys Ala Leu Asp Lys Ala Lys Ser His Gly Phe 210 215 220 Ile Lys <210> 15 <211> 568 <212> PRT <213> Helicobacter felis <400> 15 Met Lys Met Lys Lys Gln Glu Tyr Val Asn Thr Tyr Gly Pro Thr Thr 10

His Asp Tyr Thr Thr Tyr Gly Glu Glu Leu Lys Phe Gly Ala Gly Lys

Gly Asp Lys Val Arg Leu Gly Asp Thr Asp Leu Trp Ala Glu Val Glu

25

30

33	40	4.5

	Thr	Ile 50	Arg	Glu	Gly	Met	Gly 55	Gln	Ser	Asn	Ser	Pro 60	Asp	Glu	Asn	Thr
	Leu 65	Asp	Leu	Val	Ile	Thr	Ásn	Ala	Met	Ile	Ile 75	Asp	Tyr	Thr	Gly	Ile 80
,	Tyr	Lys	Ala	Asp	Ile 85	Gly	Ile	Lys	Asn	Gly 90	Lys	Ile	His	Gly	Ile 95	Gly
	Lys	Ala	Gly	Asn 100	Lys	Asp	Met	Gln	Asp 105	Gly	Val	Ser	Pro	His 110	Met	Val
,	Val	Gly	Val 115	Gly	Thr	Glu	Ala	Leu 120	Ala	Gly	Glu	Gly	Met 125	Ile	Ile	Thr
2	Ala	Gly 130	Gly	Ile	Asp	Ser	His 135	Thr	His	Phe	Leu	Ser 140	Pro	Gln	Gln	Phe
	Pro 145	Thr	Ala	Leu	Ala	Asn 150	Gly	Val	Thr	Thr	Met 155	Phe	Gly	Gly	Gly	Thr
(	Gly	Pro	Val	Asp	Gly 165	Thr	Asn	Ala	Thr	Thr 170	Ile	Thr	Pro	Gly	Lys 175	Trp
į	Asn	Leu	His	Arg 180	Met	Leu	Arg	Ala	Ala 185	Glu	Glu	Tyr	Ser	Met 190	Asn	Val
(	Gly	Phe	Leu 195	Gly	Lys	Gly	Asn	Ser 200	Ser	Ser	Lys	Lys	Gln 205	Leu	Val	Glu
(	Gln	Val 210	Glu	Ala	Gly	Ala	Ile 215	Gly	Phe	Lys	Leu	His 220	Glu	Asp	Trp	Gly

Thr Thr Pro Ser Ala Ile Asp His Cys Leu Ser Val Ala Asp Glu Tyr

Asp	Val	Gln	Val	Cys	Ile	His	Thr	Asp	Thr	Val	Asn	Glu	Ala	Gly	Tyr
				245					250					255	

- Val Asp Asp Thr Leu Asn Ala Met Asn Gly Arg Ala Ile His Ala Tyr 260 265 270
- His Ile Glu Gly Ala Gly Gly Gly His Ser Pro Asp Val Ile Thr Met 275 280 285
- Ala Gly Glu Val Asn Ile Leu Pro Ser Ser Thr Thr Pro Thr Ile Pro 290 295 300
- Tyr Thr Ile Asn Thr Val Ala Glu His Leu Asp Met Leu Met Thr Cys 305 310 315 320
- His His Leu Asp Lys Arg Ile Arg Glu Asp Leu Gln Phe Ser Gln Ser 325 330 335
- Arg Ile Arg Pro Gly Ser Ile Ala Ala Glu Asp Val Leu His Asp Ile 340 345 350
- Gly Val Ile Ala Met Thr Ser Ser Asp Ser Gln Ala Met Gly Arg Ala 355 360 365
- Gly Glu Val Ile Pro Arg Thr Trp Gln Thr Ala Asp Lys Asn Lys Lys 370 375 380
- Glu Phe Gly Lys Leu Pro Glu Asp Gly Ala Asp Asn Asp Asn Phe Arg 385 390 395 400
- Ile Lys Arg Tyr Ile Ser Lys Tyr Thr Ile Asn Pro Ala Leu Thr His 405 410 415
- Gly Val Ser Glu Tyr Ile Gly Ser Val Glu Glu Gly Lys Ile Ala Asp
- Leu Val Val Trp Asn Pro Ala Phe Phe Gly Val Lys Pro Lys Ile Val

Ile Lys Gly Gly Met Val Val Phe Ser Glu Met Gly Asp Ser Asn Ala 450 455 460

Ser Val Pro Thr Pro Gln Pro Val Tyr Tyr Arg Glu Met Phe Gly His 465 470 475 480

His Gly Lys Ala Lys Phe Asp Thr Ser Ile Thr Phe Val Ser Lys Val
485 490 495

Ala Tyr Glu Asn Gly Val Lys Glu Lys Leu Gly Leu Glu Arg Lys Val
500 505 510

Leu Pro Val Lys Asn Cys Arg Asn Ile Thr Lys Lys Asp Phe Lys Phe 515 520 525

Asn Asp Lys Thr Ala Lys Ile Thr Val Asp Pro Lys Thr Phe Glu Val 530 535 540

Phe Val Asp Gly Lys Leu Cys Thr Ser Lys Pro Thr Ser Glu Val Pro 545 550 550 555

Leu Ala Gln Arg Tyr Thr Phe Phe 565

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34